CLAIMS

1. A method of severing an optical fiber using a laser beam, in which a laser beam emitted from a laser beam source is applied through a square light transmitting section and a lens to an optical fiber, to form a square light spot on the irradiated portion, for melting, evaporating and severing the optical fiber at said irradiated portion, comprising the step of fixing the portion to be severed at, of the optical fiber, in a cylindrical capillary formed to be flat on the side to be irradiated with the laser beam.

2. A method of severing an optical fiber using a laser beam, in which a laser beam emitted from a laser beam source is applied through a square light transmitting section and a lens to an optical fiber, to form a square light spot on the irradiated portion, for melting, evaporating and severing the optical fiber at said irradiated portion, comprising the steps of obtaining beforehand and storing the corresponding relation between the first angle formed between the laser beam irradiation direction and a plane perpendicular to the axial direction of the optical fiber and the second angle formed between the severed end face of the optical fiber and said plane, with a laser beam irradiation condition as a parameter; obtaining the first angle for a desired second angle based on said corresponding relation at a desired laser beam irradiation condition; supporting the optical fiber in such a manner as

to achieve the obtained first angle; and carrying out said severing.

3. A method of severing an optical fiber using a laser beam, according to claim 2, wherein cases of the corresponding relation under respective laser beam irradiation conditions are stored as a functional formula.

4. A method of severing an optical fiber using a laser beam, according to claim 2, wherein cases of the corresponding relation under respective laser beam irradiation conditions are stored as a table.